- - 1. (Currently Amended) A combination comprising:

a flat plate panel converter having a top upon which sunlight is impinged, the converter deriving electricity from sunlight;

a cooling mechanism disposed beneath the flat plate panel converter to which heat created at the converter is dissipated; and

a one piece encapsulation layer comprising light transparent material contiguously and collectively peripherally surrounding the flat plate panel converter and the cooling mechanism beneath the flat plate panel converter. - -

- - 2. (Previously Presented) A combination according to Claim 1 wherein the cooling mechanism comprises a fluid-flow passageway to which the heat from the converter is transferred. - -

- - 3. (Previously Presented) A combination according to Claim 2 wherein the passageway is defined by at least one thermally conductive metal tube. - -

- - 4. (Previously Presented) A combination according to Claim 1 wherein the configuration of the metal tube is serpentine. - -

- - 5. (Previously Presented) A combination according to Claim 3 further comprising a thermally conductive metal sheet disposed above the metal tube. - -

- - 6. (Previously Presented) A combination according to Claim 1 further comprising a layer of material interposed between the cooling mechanism and the converter, the layer comprising material which is dielectric and thermally conducting. - -

- - 7. (Previously Presented) A combination according to Claim 1 further comprising thermal insulation surrounding at least part of the cooling mechanism. - -

- - 8. (Currently Amended) A combination according to Claim 1 further comprising ~~a support layer for the converter superimposed over the cooling mechanism~~ a vacuum space between the top of the flat plate panel converter and the encapsulation layer, ~~the space having~~ and support structure for the encapsulation layer being located within the space to prevent vacuum collapse of the encapsulation layer. - -

- - 9. (Currently Amended) A combination comprising:

at least one flat plate panel solar element comprising a surface upon which sunlight is impinged, the solar element converting sunlight to electricity; and

a sunlight concentrator offset from the flat plate panel solar element comprising at least one fixed angle side deflector~~ion~~ adapted to extend angularly skyward away from and rigidly affixed to a peripheral location adjacent to the surface of the solar element and from which rays of sunlight offset from but adjacent to the surface of solar element are deflected therefrom against the surface of the solar element whereby ~~a greater quantity of electricity is obtained~~ the amount of sunlight impinging on the solar element is increased. - -

- - 10. (Currently Amended) A combination according to Claim 9 wherein the ~~sunlight concentrator~~ deflector comprises at least two opposed upwardly diverging fixed angle~~ular~~ side mirrors angularly disposed peripherally to the surface of the solar element ~~to concentrate more sunlight on the surface~~. - -

-- 11. (Previously Submitted) A combination according to Claim 9 wherein the surface of the at least one solar element is generally flat, the combination further comprising a heat transfer system disposed beneath the solar element comprising a passageway through which fluid is passed to transfer heat from the solar element to the fluid. --

-- 12. (Currently Amended) A combination according to Claim ~~9~~ 11 wherein the passageway is defined at least in part by a thermally conductive serpentine metal tube. --

-- 13. (Previously Submitted) A combination according to Claim 12 further comprising a thermally conductive sheet interposed between the solar element and the metal tube. --

-- 14. (Previously Submitted) A combination according to Claim 11 further comprising material interposed between the solar element and the heat transfer system the material being thermally conductive but electrically non-conductive. --

-- 15. (Previously Submitted) A combination according to Claim 9 further comprising a support backing upon which the solar element is superimposed. --

-- 16. (Currently Amended) A combination according to Claim 9 further comprising a multiple axes tracking system by which the solar element is ~~placed and~~ automatically tilted and rotated progressively to retained an essentially perpendicular relation to the sun. --

-- 17. (Previously Submitted) A combination according to Claim 9 further comprising a mechanism by which the combination is generally inverted during times of low and no sunlight to protect the surface and deflector for environmental contaminate. --

-- 18. (Currently Amended) A vertically shallow combination comprising:

a flat plate panel sunlight-to-electricity converter which does not project into the air;

a cooling system disposed next to the flat plate panel away from the sun; and

a multiple axes automated tracking system supported upon and in close relation to a support surface at multiple spaced locations by which a tilt position and a rotational position of an exposed surface of the flat panel is ~~normally~~ automatically maintained essentially perpendicular to the sun during daylight hours which minimize wind load imposed on the panel. --

-- 19. (Currently Amended) A combination according to Claim 18 further comprising at least one angularly-disposed rigidly positioned side board reflector whereby adjacent sunlight not aligned with the exposed surface of the flat panel is deflected onto the exposed surface. --

--20. (Currently Amended) A combination according to Claim 18 wherein the combination collective comprises ~~presents~~ a low vertical profile. --

--21. (Currently Amended) A method of deriving electricity from sunlight comprising the acts of:

impinging sunlight perpendicularly upon a surface of a flat plate panel located only a short vertical distance about a support surface;

supporting the flat plate panel at multiple locations at the support surface;

continuously and automatically moving the surface of the flat plate panel about a horizontal axis and a vertical axis to maintain the perpendicularity;

converting the impinged perpendicular sunlight to electricity while generating heat at the flat plate panel; and

transferring heat from the flat plate panel to elevate the temperature of a fluid circulated adjacent to an underside of the flat plate panel. --

--22. (Presented Previously) A method according to Claim 21 comprising the further act of utilizing the elevated temperature of the fluid to do work. --

--23. (Presented Previously) A method according to Claim 21 comprising the further act of passing the heat from the flat panel to the fluid across a dielectric heat transferring medium. --

--24. (Currently Amended) A method according to Claim 21 wherein the impinging act further comprises impinging out of alignment sunlight ~~both directly and through~~ by angular side panel mirror deflection upon the surface of the flat plate panel. --

--25. (Currently Amended) A method of deriving electricity from sunlight via an angularly and rotationally variable low profile solar-to-electricity apparatus comprising the acts of:

supporting a flat plate solar panel upon several engagement locations so as to be vertically compact and disposed at a variable angle to the vertical and at a variable rotational position;

impinging sunlight upon a surface of the moving flat plate solar panel and deriving electricity and heat therefrom;

transferring heat from the flat plate solar panel to a fluid circulated adjacent to the flat plate solar panel; and

~~multiple axes~~ bi-axially tracking the flat plate solar panel automatically changing the angle to the vertical and the rotational position of the flat plate solar panel without changing the vertically compact nature of the flat plate solar panel to thereby follow the sun so that the surface is automatically kept essentially perpendicular to rays of the sun. --

--26. (Currently Amended) A method according to Claim 25 wherein the impinging act comprises impinging rays of the sun aligned with the flat plate solar panel directly on the surface and also angularly deflecting rays adjacent to but not aligned with the surface onto the surface to thereby ~~concentrate a greater~~ enlarge the amount of sunlight ~~on~~ reaching the surface. --

--27. (Previously Submitted) A method according to Claim ~~26~~ 25 further comprising the act of rotating the flat plate panel to face generally downward in times when there is little or no sunlight. --

- - 28. (Currently Amended) A method according to Claim 25 ~~further comprising~~ wherein the bi-axially tracking act ~~of maintaining of the flat plate panel and associated components~~ comprises continuously optically sensing the position of the sun in the sky and issuing signals a displacement mechanism by which the perpendicularity is maintained. - -

- - 29. (Currently Amended) A solar generator comprising:

a solar energy to electrical energy converter comprised of at least one surface angularly disposed to the vertical upon which sunlight is impinged, the converter being mounted in flat relation on a vertically narrow support;

a cooling system associated with the converter but remote from the surface;

a bifunctional material interposed between the converter and the cooling system prohibiting transfer of electricity thereacross but accommodating transfer of thermal energy thereacross;

an optical sensor continuously monitoring the location of the sun in the sky; and

a control responsive to signals from the optical sensor continuously varying the angular and rotational position of the surface to maintain perpendicularity between the rays of the sun and the surface without human intervention. - -

- - 30. (Currently Amended) A solar generator according to Claim 29 further comprising a one-piece uninterrupted light transmitting envelope encapsulating the ~~solar generator~~ energy converter in a hermetically sealed, evacuated manner ~~environment~~. - -

- - 31. (Currently Amended). A solar generator according to Claim 29 ~~further comprising~~ wherein the converter comprises at least one peripheral light deflector angular to but out of alignment with the one surface by which additional peripheral sunlight is ~~concentrated~~ redirected to the one surface. - -

- - 32. (New) A method according to Claim 28 wherein the optically sensing act comprises sensing at one location the instantaneous azimuth position of the sun and at another location the instantaneous latitude position of the sun. - -